

Still Alive With Sir Clive!

ZXir QLive Alive!

The Timex/Sinclair North American User Groups Newsletter

Volume 7 No. 4

Winter '87

Chairman

Donald S. Lambert

Auburn, IN



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IT IS
THAT
TIME
AGAIN

Your
Membership is
Due



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ESTABLISHED 1981 THE TIMEX/SINCLAIR NORTH AMERICAN USER GROUPS NEWSLETTER

T/SNUG Information

We wish to support the following platforms: 286/486, T3-1000, Spectrum, T3-386, Z88 and QL. If you have any questions about any of these five Sinclair contact the

Chairman

Cliff McDevor
Donald S. Lambert (secret)

Vice-Chairmen

Tape & ROM PD Library
D G Smith
415 Stone St
Johnstown, PA 15906
814 533-6998

Z88 Library
Dave Bennett (8473003)
1275 Timber View Dr
Madisonburg, PA 17051-9146
717 732-4074

RMG Enterprises
Rod Gorman (504756)
14794 S. Quad Grove Cir
Oregon City, OR 97045
503 695-5484 FAX 503 623-4114

T3-386
Rod Humphreys (40040)
10934 Colton Pl
Data, DC WAC 386 Canada
604 983-2815

QL PD Library
John Donaldson (20004)
815 Townsend Cir
Greenville, IL 60141-1631
609 330-6147

AERCO & Z80 Emulator
Keith Wilson
41434 Ambler Dr
Mt. Clemens, MI 48004

BBS -----GATOR-----
Bob Swager (847100)
412 Parkside Cir
Southwood, IL 60107-1647
630 837-7657 Fax 847 376-8044

Any of the above can also be reached by E-Mail through the Club BBS 847 632-5558

ZXir QLive ALive!

It is the newsletter of T/SNUG, the Trans Sinclair North American User Group, providing news and software support to the T/S community in a **VOLUME** of four newsletters per year, beginning with the Spring (March) issue.

T/SNUG's main goal is to preserve and encourage the use of Sinclair computers by providing an open forum for the exchange of knowledge, building and maintaining of software libraries. Providing vendors, repair service and members with free ad space.

It is the user groups and individual subscribers, rather than the vendors, that provide the monetary support for the newsletter. Vendors and developers receive this newsletter free of charge, though contributions from vendors and user groups is gratefully accepted. Please support our vendors and service providers whenever possible.

If you have a problem or you have solved a problem, please share it with the rest of us. No problem will be considered unimportant.

Editor/Treasurer Publisher

Abelard B. Kahale

You can keep T/SNUG alive by an annual contribution of \$10 for one VOLUME made payable to Abelard Kahale. Send check to -

ABELD KAHALE
3343 S FLAT ROCK CT
SIERRA VISTA, AZ 85638-8874
520 378-3434

Back copies are available for \$1.00 each postpaid.

Treasury Notes

As of December 10, 1997, we have a balance of \$482.87

Article Contributions

Send in your articles by tape or disk and your inputs to -

DONALD S LAMBERT
1301 KIELINGER PL
ALBUQUERQUE 87106-3010
Phone 519 925-1372

By hardcopy, 48000 or modem (1-13-60) to Abelard Kahale

E-mail: AKahale@compuserve.com

GATOR's TWISTED PAIR

To better inform the Sinclair Community, four 24-hour a day BBSs are now provided to serve you. You are encouraged to exchange mail and use the files sections of these boards. Mailboxes and ads are available to all.

Q-Bus BBS 800 254-0878

Union, Michigan

SCC Server Jess Marston

<http://members.tripod.com/~holypaul/>

SCS BBS 518 443-0448

Tucson, Arizona

Club BBS 847 632-5558

Arlington Heights, Illinois

If you know the Internet E-Mail address of a Sinclair user, but do not have access to Internet, simply address your E-Mail to GATOR. Sinclair on the 14-hour Club BBS and include the name and E-Mail address of the user you wish to reach. Then check the Club BBS from time to time if you expect a reply.

We encourage you to exchange mail and contribute to the UPLCAD section. Call and register using your first, last name and phone number along with a password you won't forget. *Where's B. Dennis?* Do not try to do anything else at the time.

When you call-in the next time you will have Level 5 security and be able to enjoy all user privileges. The BBS has smaller sections called conferences. Select "7" for the "Join a Conference" Select "TMDX" to get into the Sinclair Section. The mail you then read will only be from other T/S users. Use extension ALT for articles. ALT for ads and NWS for news items UPLCAD/Dog.

For help, contact the SYNOG. Bob Swager, by leaving a message, mail, E-Mail or phone. Bob, Swager-CEING188@usa.net.com

The RMG Project

Rod Gowen has made it known to T/SNUG that he has to move and clean out his stock of Sinclair items. Wanting not to see these items in a land-fill, he has generously offered to pack up and send the items anywhere for a modest price. To date, no one has come forward. When Sinclair owners were polled the biggest factor seemed to be that no one had the room for storage.

Members of T/SNUG have come up with a plan to collect contributions for a project to fulfill Rods monetary request. Rod could then ship his Sinclair stock to a storage space in Boxholm, Iowa provided by Jay Shepard. Contributors to the project would have no string attached, that is, contributors would not expect any of the items on the list in return for their portion of the contribution.

Once the stock moves from Oregon to Iowa, T/SNUG is out of the picture making no demands on anyone. Any money left over from the project would go into the T/SNUG treasury to keep T/SNUG going; the T/SNUG treasury is very low at this present moment and therefore can not handle the project on its own.

T/SNUG suggests that FWD Computing, our last and soon to be full time vendor, could draw from the stock as he receives requests from his customers and thus fulfill the needs of the Sinclair community. Frank Davis would work out the monetary details with Jay Shepard, the owner of the storage facility in regards to shipping. Again, T/SNUG makes no demands.

To get the ball rolling, CATUG has contributed \$200 to the project. It is hoped that other groups and individuals will send in their contributions for the project very soon as Rod has to get started very soon.

**T/SNUG now makes a plea to
individuals and Sinclair User Groups to
send in contributions for the project.**

Abed will keep us informed as to how the project is going.

Bob Swoger

Input/Output

by *Abel Kahale*

From: Bob Swiger

Sent: 06-10-97 13:18

After reading ZQ's QLine Alert (Summer 97) I noted a few needs to be corrected. Remove all references to "MACE 3035" and replace it with "The Club 3035". Still the same phone number.

In regards to Dave Lasso's blurb on page 3 and 4 in response to Gil Parnod's fine Larkin first time users article "What is DPM?" We have never heard of it. Consists with pull down windowed?

Where do you get that? The only Consists I've ever seen was from Canada and was well named. It isn't one program but rather gets of programs located all over the place (CONPG means "in all directions") on different drives.

Did you ever try DPM? There is no clue on the screen for the first time user. No manual came with it. I did,

however, get a manual from the author, Jack Dehany, some years later, but no manual for DPM came with the Larkin system when I received same. DPM turned out to be a very powerful tool but it isn't the fastest means way to operate the Larkin Disk system for the new or casual TS2064 user. Gil seems to use a monochrome monitor. Mono-

chrome monitor users should modify their L. B1 program to use the BLACK PAPER mode [0] rather than the mode: BLUE PAPER mode [1] for Color Monitors. As for Color Monitors, I've tried them all in the composite video mode, Apple, Commodore, Amdek, Zenith and Magavox. The best is the 40 column Magavox by far, with the 40 column Magavox a close second. Zenith is a good third choice. Going to the RGB output on the Magavox gives superior performance getting rid of the wiggles mentioned by Gil.

Dave's mention of the call to non-available interrupt location is not casual. This is the location forewarn programmers go to in case of a crash because nothing can prevent that location from executing code.

-----CUT-----

Dear Abel,

Received the latest ZQAJ and immediately spotted the Sinclair Error List on page 7. No! that isn't really true. I read some of the items on pages 2 - 5 and spotted the list when I turned to page 6/7. Right then and there, I decided that my Email address should be available to the group. Anyway, here's my address <swiger@juno.com>

I'm NEW to Email and decided to go with the "no-cost" JUNK service. I use a 386 IBM compatible (40 Mhz) for my Email correspondence because I had no idea of how I could use a 2086 for that purpose... I was pleased to see my "surplus TS stuff" ad on page 23. Thank You, Sincerely,

Fred Swiger swiger@juno.com

Abel,

Here is my valid e-mail address

swiger@jacks.ore.com

swiger@jacks.ore.com (for printing to jack.ore.com)

Tim Swiger swiger@jacks.ore.com

Hey, Abel!

Got your newsletter (Autumn 97) yesterday. Missed the request for donations to TS2NUG for the purpose of keeping the RMG Times/Sinclair staff out of some Oregon Landfill. As all your readers seem to agree, the newsletter format and articles are most informative BUT

I see, by reading between the lines, there seems to be two products out there many of us TS2064ers have never heard of before. Why don't we get something about them in print? I'm talking about David Lasso's article entitled "TeleCom Items on Page 16 of Vol 3 No 3. He keeps talking about ADAPIN, do we have FAX for the TS2064?

How about an ARTICLE PLEASE! Will we need hardware that will be gone by the time we see an article?

How about the reference to the "Dallas SmartWatch" for the TS2064/Spectrum? We could use an article about this. Is it still available? How about schematic and overlay? -----CUT-----

Abel,

A while back, I recall your asking me to expand on these hardware items for the 2064, and I declined for fear of licensing problems, etc.

Well, on pages 16 and 17 of the last issue of ZQAJ, we have given out the relevant telephone numbers (and a list of other telephone numbers, as well, I might add.)

That is the extent of the information, I felt comfortable to give out, in order that interested parties talk with the original developers, and so on.

Since I am eager to pass on some of my experiences with the hardware, that someone can read, don't you think you can help me with what reviewers might be up against?

Sure don't want to get us all in trouble!
KEEP ON TIME X ~

David Lasso

You have not infringed on anyone's rights by just mentioning the names of the two products.

I hope these two gentlemen would provide us with information about the software to keep our members informed.

RMG

I don't know how much the CATUG treasury has, but I recommend and cast a vote for CATUG buying all the stuff it can't come to much more than \$100 after shipping costs are added on. Wasn't there something like \$3500+ in the CATUG treasury? It's been so long, I really don't remember.

Anyway, my impression is that CATUG is the strongest (last) 2064 group, and it only makes sense that they would strongly consider acquiring RMG's stuff (which I presume is 99% 2068 stuff). But a P40 can inventory it

and the group could be the repository of spare parts for the rest of the users in the country. Just a thought.

Of course, the other alternative is for TSNUG to buy it, but, I think CATUG should consider: shouldering the load. That way, Hoby might be prompted to printing a Mini-Times News with a periodic listing of what is available: our cases, hardware, the rest, software, files, books, and, so on.

I sent Gary Norton and the program author a copy of QJATter = a stripped down version of QJAMBER (what QJATter is = QJAMBER [whatever THAT meant] -- it means less functions, but it will run on an unexpanded and unenhanced QJ) -- and, QJATter has been placed in the public domain to be used as a front-end for QJAY, and they can distribute it freely.

Al Peng

I'll send the QJATter file (sincerely, I guess it will be appended onto the end of this message)

I found out (sincerely!) that the reason that the QJL was not responding was because the more recent versions of the RMISQ operating system presume that a 16-bit standard is being implemented. Up to version 2.51 will operate the next when it is only utilizing an 8-bit bus connection. I don't know if that makes sense to you.

Al Peng

As for critique on David's memo program... see the CATalog printout on page 177. His AUTOSTARTs are two lines long, what a waste. He didn't read my ULTIMATE AUTOSTART article. See how he uses RAND USER CODE "M" in all his programs instead of RAND USER ID, wastes 3 bytes every time!

Those CLEAR MOVES were the tip off, they should read CLEAR 12573, the whole TSNUG world should know that by now! His memo only works either the Times or Sunday mode, not both. And did he really send in the program on TSNUG printed paper? YUK!
(He did, in my respect because I could not rely on the Email version that I had to proof read. So I just made a picture of it. Next time he will send a disk and then I can proof it.)

We only could type in the program if only he'd have used BSETACT, all of us LogiCall people owe to make newsletter articles readable.

David shows a memo and mentions selecting "D", there is no "D" in the memo print out that I can see. David did have another mistake in the article, he mentions "Jack DeLong's MSCKRPT". MSCKRPT is actually authored and owned by Steve Pagliaro of Indiana-Systems Software, Inc. of West Palm Beach, Florida. Steve also authored MTERM and MTERM II so go with it. I own a legal copy of MTERM that was never touched by Jack, it is the only version that works with the keyboard overlay from E. Arthur Brown.

I talked to Steve and he still refuses to release the code to public domain so he claims that he still owns some of it in Arsign products. Jack only added Disk Drive capability,

removed the onboard help, added other features to MSCKRPT by writing new BASIC drivers for it so I had to do for LogiCall to work with it. Jack and I, as now goes. Frank Davis, always had to make sure for purchaser had a legal copy of MSCKRPT before releasing our stuff to their purchaser.

So, Steve Pagliaro owns the rights to MSCKRPT and MTERM - Frank Davis owns the rights to Easyp authored by Bill Jones.

-----QJATCH-----

Alred,

The only people to complain of having difficulty, downloading from SOL RMS, were not using 2000's!

As you may know, this is the only RMS -- in the world -- to run entirely on a Times-Sensler Computer, Model 2000. :)

The downloading problem for people, who call in on an Apple or PC, concerns its largely, and Bob has given us an idea of how to proceed, after his fine description of the problem in the current issue of ZQAJ Magazine.

We will see the pages of ZQAJ Magazine to describe our program, and

THANK YOU, Bob !!

David E. Latzow (wpw), SOL RMS @ 120 882-0388
120-882-0972 (wpw) emmsoc@panstar.com (Email)

Did you see my posting about needing a

good Desk Top Publishing software?

(for the 11-2000/)

If so any suggestions?

Thanks,

Bill Clark RMS

I received copy of newsletter. I thought it was interesting.

What was the program that did the layout? (MS Word for Windows)

Is it available for the QJL if so, Where can I get it?

Thanks for your help

Bill McKelvey

812 MERCER AVE

SPRING LAKE HTS NJ 07762

Alred,

I got a message from D. O Smith (Monty smith

@pana.com). Long-time R/JNG user -- who must have read the ZQAJ article. He agrees that version 1.38 has problems I guess he did not experience the disk-up file corruption that I had. He said that he was (just) able to get it to work with a 2000-based modem. I'll report his findings at the end of this.

Al Peng

Al

You have probably gotten other responses by now, but here are some of my thoughts. I've been with Jango since the beginning, and while I don't much care for version 1.38, the problems you describe must be from a defective copy or

usual. I liked version 1.15 the best. The ads didn't mislead, or slow the computer, and it ran well on a slow IBM with Hercules mono and 2400 BPS modem. In fact, I installed and ran it on a 286 briefly.

When I finally "upgraded" to version 1.16, I had nothing but problems. I finally deleted all traces of it and reinstalled. No more problems, but it is much slower than the previous versions, and I don't like the way the ads take over when you first start the program.

Oh! No hint on Email messages and you can do Faxes, Web searches, and binary file transfer with Jan's Email. Look for Dr. Rod's guide to flip by Email FAQ.

Are you online in any other way, like Usenet or whatever BBS's?

Dennis Smith

dennis.smith@comcast.com

Al Peng wrote:

Bob,

I don't know how much the CATUG treasury has, but I recommend and cast a vote for CATUG buying all the stuff. It can't come to much more than \$200 after shipping costs are added on.

Wasn't there something like \$200+ in the CATUG treasury? It's been so long, I really don't remember. Anyway, my impression is that CATUG is the strongest (well) 2064 group, and it only makes sense that they would strongly consider acquiring RMG's stuff (which I presume is 90% 2064 stuff). Either you (Bob) or Phil can inventory it and the group could be the repository of spare parts for the rest of the users in the country.

Just a thought. You can print the availability list in the Nine-Times News -- one name, hardware, the area, software, *docs*, books, and so on... Al

The problem with the RMG stuff is that no one in our group has room for it. There is a move about, however, to have TSNUG forward the money to RMG. RMG would then forward the stuff to Jay Stigaud for storage. Our last vendor, FWTI, would be the distributor for those who wanted anything. Contributors would forward the money for the cases to TSNUG. CATUG will send in the first \$100 soon. That is the plan so far. -----GATOR-----

Abel,

Just a note about today's CATUG meeting. The meeting was to begin at 2:00pm. Don Lambert showed up at 1:PM. I was glad he did. I showed him around the house that he might use the TSNUG scraps before the guys got here. Only Donaldson could not come. We had a rather quick business meeting on the patio. We never went into a formal meeting, all was said in less than 10 minutes. Don gave me a letter from Rod Goren. I trust you also got a copy in that it contained the same news you passed on to me the other day on the Internet.

Nazir gave us an expanded dog and pony show that he gave at the picnic. Don wanted to see the **math co-processor** for the T82066. If time and circumstance had permitted, Nazir would have had a demo of programs that could be **run on two side-by-side T82066** which would show

the increased speed using that math co-processor.

Frank sold many 14.4 modems at the picnic. We tried three of them here today in my shop and found that Nazir's did not work. A quick call to TWD computing and Frank said he'd hold one for Nazir for exchange. Nazir was elated! Cy brought a broken and a tape recorder over for repair and we sent him home with all his stuff working again.

The CATUG money for the RMG project will be coming to you soon. Were you able to fill Rod's request for 2040 on 1-2" disk?

-----GATOR-----

How about an article or a draft thereof, Nazir??

Yes, I did send Rod a disk and will do so from now on.

Hello Abel,

Thank you for the response to my letter. As for it being late, I would not worry about that.

I work your wife the best. After all of the problems that my wife went through during her last 3 hours. I am empathetic with you.

I would like to get the entire magazine on disk if possible. What you sent me was readable, but the files did not contain any carriage returns or linefeeds. I prefer to have those in the file so they break the text up into manageable pieces. I know that I said that the files had to be ASCII but ASCII can contain carriage returns and linefeeds, just as formatting commands or printer codes. The best way would be to print your files to a file. That way the text is laid out exactly as the magazine except on disk.

As you know by now, I sent a letter to Don Lambert that said essentially what I said to you last time. I am not sending him a letter this time.

If all goes well, I plan to get set up to access the Internet sometime after the first of the year. I will be using my little Type 'N' Speech that I told you about. As it is strictly a text based unit, I will be using LINKS to get around and will be able to send/receive e-mail. I will keep you posted as to my progress at getting connected.

Sincerely,

Rod Goren

From now on I will **SAVE** the newsletter in text (not to file) and mail you the disk. I have been only **MAILING** the printed masters for making copies.

Dear Abel

Apparently a couple pages of the issue for "More on GPC" I sent you on disk either fell on the floor or got lost in the mailboxes, as page 11 in the current 2040 jumps to the closing page. Part of the meeting text, of course, appears separately in my letter of clarification as printed on page 6.

Rather than re-printing the entire text in the next issue perhaps you may want to provide readers with the enclosed "do-it-yourself" pages with instructions for assembly. Except for a slight clarification I made in the third line from the top of page 2 in the enclosed hard copy, and my comments in the end, the rest of the meeting sample are the same as in the ASCII copy I sent you on disk.

As always, I leave the editorial prerogatives up to you.

as to whether to use this or not.
Best regards,

Bob

Yes, I have done it again, a whole page is
missing, my apologies.

Dear Alvin,

No apologies necessary! As someone who has put out
caveatlets, for nearly 30 years I know full well how such
things happen. The classic definition of word-processing is
a software program that slowly creates errors until a hard
copy is printed out (just mailed).

The only one I am aware of who is interested in the
missing page is Kasten Garrett. He frequently concerns by
phone and correspondence so I have already sent him the
complete text.

My memory of some who had questions about setting
up a DOS boot floppy for QPC was as reference to remarks
that appeared in recent issues of QJ. Truly. As an attorney
for nearly 30 years perhaps I acquired another classic
definition, that a presaler is "someone who tries to answer
questions nobody else is asking."

With best regards,

R. Kasten Garrett
R. Kasten Garrett
QJ Editor
QJ Editor

Hello Rod,

It is good to hear from you. Our annual computer club
picnic in September came off well with Frank Davis, John
Impellizzeri and Don Walstrom in attendance. The picnic
celebrates the Motorola, Gemma Color Computer and
CATUG clubs. Frank sold 7 modems and some Spectrum
CDs to guests.

LogCall for MSDOS? Yes, what you read was true.
Microsystems Engineering was the creator of MASS II, an
integrated software package for the DOS and IBM
platforms. It was MASS II that inspired LogCall for the
Spectrum and TSNUG. Getting frustrated with all the
directory changes and file management tasks, why couldn't
the PC be as easy to use as the TSNUG. Why not indeed!
And LogCall was born.

The immediate language on the TSNUG is BASIC.
The Immediate Language on a MSDOS machine is
COMMAND.COM. If COMMAND.COM can't find a
directory within itself, it looks for an external command file,
then an executable, then a batch file to run. Since the
machine had MSDOS 3.0 or 2, I read that manual. It
suggested writing batch file programs and placing them into
a directory called BELFRY. Where else would a logical
person put del files? Since batch files could call other batch
files or other programs for that matter, and could also type to
the screen and print to the printer and point to the different
drives and do file management, I thought I would make life
easy by a LogCall for MSDOS machine.

Now, if you want Word Perfect, type W and ENTER.
If want to print to the A. drive type A and ENTER. If you
want to print to the DOSCS directory inside the WP 3.1
directory on the C drive, type only DOSCS and ENTER.
This saves a lot of typing. Both W and T do a lot more than
just call Word Perfect and MT Easy. Word processor files
are created in the DOSCS directory. To read the file drive

the phone line using MT Easy, these files need to be placed
into the DOSCS directory of MT Easy. Similarly, files coming
in on the phone line enter the RACISIVE directory of MT
Easy. These files may be Zipped up or may need to be
zipped up using PKZIP. THAT and WHAT handle all of
that without the user having to type anything such as
deleting old files after the moves and ZIPs. LogCall for
MSDOS also takes advantage of PKZIP and a collection of
utilities from PC Magazine and other sources. Cursor
control and a utility called LIST segment LogCall features.
One quickly finds that access to Word Perfect and other
applications is faster using the LogCall system than by using
Windows. I have included LogCall for MSDOS on the
disk. LINSTALL will install LogCall on your C drive. You
must modify your search path to include C:\BELFRY and
PKZIP and PKUNZIP must be in the search path. Add L to
the bottom of your AUTOEXEC and EM out the Windows
startup call, WIN. Since we want LogCall to run after
Windows, we call Windows from a LogCall batch file called
WHAT or WIN bat. So that Windows is not suddenly
started with a call to WIN.COM we change the name of
WIN.COM to WIN.COM. One can find out more about
LogCall for the MSDOS by typing LOGCALL and
ENTER once LogCall is installed.

Since LogCall is used at my work place many batch
files are never used by most other users and can be deleted
at some future time. I have asked Alvin to send you ZQJ
on disk. He said he did that. Finally, you mentioned
SPRINT. I have never heard of it. Can you direct me to
where you read about it? What platform does it run on? Do
you have an Internet address?

Don Lambert attended our October
CATUG monthly meeting. He brought a
letter from you concerning the Sinclair
inventory you need to clear out from your
location. There is a plan underway by
TSNUG to keep this inventory out of a land
fill. The ultimate destination of your Sinclair
inventory will be Boxholm, Iowa, the home of
Jay Shepard. No one else had available
space to store your inventory. Jay has a
team. From Jay's location the inventory could
be drawn on by Frank Davis, our last vendor,
to fill needs of the Sinclair community as
needs arise. Since TSNUG paid for the
inventory, Frank would only reimburse Jay for
the shipping of each item from Iowa.

It is hoped that member groups
of TSNUG will contribute
dollars to the effort now re-
ferred to as the RMG Project.
CATUG has sent \$200 to
TSNUG to begin the project.

The members of Q-Box in Michigan that

Winter 1997

attended our picnic in September, agreed that the idea seemed sound enough to work. We hope that an article in the next 23rd QLive Alford newsletter will generate the funds you request. It is assumed that Abed will keep in touch with you to let you know how the project is going. You mentioned that excess funds would be returned to the purchaser. As the treasury of T/SNUG is getting dangerously low due to copying costs, return of excess funds might remain in the T/SNUG treasury to extend the life of the newsletter or be divided back to the original contributors if those contributors choose. CATUG has already chosen to leave their portion in the T/SNUG treasury. Please let Don Lambart and Abed know how you feel about this plan.

Sincerely,

Bob Swoger

I did receive a \$200 check from CATUG. Bob

The Gifted Refree

There was an engineer who had an exceptional gift for fixing all mechanical things. After serving his company loyally for over 30 years, he happily retired. Several years later his company contacted him regarding a seemingly impossible problem they were having with one of their multi-million dollar machines.

They had tried everything and everyone due to get the machine fixed, but to no avail. In desperation, they called on the retired engineer who had solved so many of their problems in the past. The engineer reluctantly took the challenge. He spent a day studying the huge machine. At the end of the day he marked a small X in chalk on a particular component of the machine and proudly stated, "This is where your problem is!" The part was replaced and the machine worked perfectly again. The company received a bill for \$24,000 from the engineer for his services. They demanded an itemized accounting of his charges. The engineer responded briefly:

One chalk mark \$1
Knowing where to put it \$45,999

This was taken from the Alameda County District Attorney's Office publication:

In a murder trial, the defense attorney was cross-examining a pathologist. This is what happened:

Attorney: Before you signed the death certificate, had you taken the pulse?

Coroner: No.

Attorney: Did you listen to the heart?

Coroner: No.

Attorney: Did you check for breathing?

Coroner: No.

Attorney: So, when you signed the death certificate you weren't sure the man was dead, were you?

Coroner: Well, let me put it this way. The man's brain was

staring in a jar on my desk. But I guess it's possible he could be out there practicing law somewhere.

amccord@att.net

RMG Project

What an excellent idea, let me second my agreement, praise and continued enthusiasm. My only suggestion is to perhaps, modify the use of barn as the building that could house these treasures. While there has been no livestock on the 142 Acres that make up the Shopped Farm After/ Cattle JK Ranch, there still might be some folks with an agricultural background who would cringe at the thought of locking a venture to preserve and maintain a stockpile of vintage computer hardware, software, and parts in a BARN!

So, let's say the building to house this stuff will be in a building on a farmstead that's been out of use for 30 odd years and has a good roof and floor with or some some such description. And that I'll handle the maintenance in good or my reputable workmanship, with lots of TLC.

I further suggest that the idea has much merit that if volunteer efforts are not productive, that a five-odd levy be placed on all known members of anything similar at an amount arrived at equally and if the levy short a follow-up levy be placed on the previous years. Or some such method by some kind of conception. What ever it's a good cause, right? So anything that works is for

Sincerely, J

From: jshapiro@netnet.net

Firestone '45 - T3 '83 - Chevrolet '86 - Windsor '93

I posed these questions to David Lissner—

SmartWatch and ASAPFix

We discuss having two hardware extensions to the Times-Similar Computer Model 3000, which have proven convenient additions to our little setup here, at the northern end of the Sonoran Desert. You see, it all began in a mail order of less than \$200; after two years working on the T3000, I'd picked out of a pile of computers along the wall of a fairly dingy store in Woodbury, California, postal zone 9045 in Los Angeles at less than \$1000.

Are they hardware or software?

Well, it seems to me, that both Jack Dobson and Bill McKelvey have nicely adapted hardware devices for old IBM XT/AT clones each available from Jensen Electronics to use on the T3000 (among other machines) by writing the interface software in Z80 assembly code and adding a driver in token BASIC, which is used by the Times machines.

On which computer do they RUN?

The SmartWatch gives both time and date on the burner, as above, the ASAPFix not only reads but also restores character flows on the XT/AT, and, they both have been converted, as above, to RUN on the 3000. However, not all functions of ASAPFix have been so converted, due to time and space limitations of the 3000 and, both Jack and Bill have versions of their devices that run on other computers.

What do they do?

After SmartWatch is installed we set time and date Variables, by calling SmartWatch and PRINTING my desired

data. What we do is a **RANDOMIZE USB PROGS**, where PROGS is the address of the BASIC program "plus 3" (PROG+3). After ASAPFax is installed, a PRINT's incoming character from our attached printer. It also sends character from our over the city telephone line, when they are readily received by all models of fax machines in use nowadays.

How do we use them?

On SOL BBS, we have extended Message communication software to map the arrival time of all incoming messages etc., and to SAVE the information as part of the message text. In all our word processors, derived from Daisy we include TimeDate of storage with each SAVE of a document to disk. Also we PRINT the TimeDate of PRINTING any letter, while using the software, underneath the letterhead. Lastly we have installed the SBT/REPLY facility for SmartWatch as "Press 4" on the Telecomm Menu Menu, discussed last time.

What is good about their use?

Well, SmartWatch provides SOL BBS with timing capabilities, the same as, or better than, the "bug boys" have. And, then goes for word processors too. The best thing about ASAPFax is the expense, with which everybody receives messages from the 2048. And it is good for sending/receiving those software everywhere. However, such communication can contain no graphics.

What is bad about their use?

The only limitations and/or drawbacks involve ASAPFax. Well, when installing SmartWatch into SOL BBS, we had to get some PEEKs from Jack, because of a storage conflict with the communications software file, so the ASAPFax graphical data creates nothing but problems.

But, of course, the BBS was never designed to process graphics. Also, the normal configuration of ASAPFax can use up a lot of paper as a theory, but we can work around that. However, a persistent problem is the inability to read the clock, upon sending, or receiving from. This shuts down the ability both to print selected stored items and consequently to many outgoing faxes.

What is the best way to use them?

I don't know. I don't speak assembly language programming, so we use SmartWatch only in places accessible to BASIC code. So, if you have a lot of applications written in BASIC, then here's a ball!

If you don't mind a little assembly language programming, then BBS's simple machine codes could be easily modified to read SmartWatch at appropriate times thus freeing up additional features of ASAPFax, as above. As it now stands, ASAPFax works best with its own telephone line, so we have not found a workable switch, for automatic routing of telephone calls between SOL BBS and ASAPFax. In other words you have to make an appointment in order to send us a fax!

Where Did We use Them?

Actually, I think we have covered that adequately above, discussing the SOL BBS communications software and our word processing software, derived from Daisy. So, let us now take space to say, that there are both ideal candidates for their own kinds of CODE, in the case of a 2048, expanded to 24 or 254 banks.

You see, the tape recorder CODE is already in ROMRAM, and hard disks and other VO processors could go into these other banks, thus freeing up the Home Bank, for more coding of devices, or they could be used for all kinds of rapid data storage like Larry Corbett's latest Bank Data Bank.

David Lanson

This is an interesting document, which you might consider for the next issue of ZIG QLine. Alvin Hahn began a program report on the testing of ASAPFax for the 2048. We use FAX2048.Ba, which also calls FAX2048.Ca, to set the sent up for SENDING a fax. Then, we use MR2048.BT, which also calls MR2048.CT, to create the fax and format the target telephone number. We quickly learned how to use FAX2048 and MR2048, to SEND faxes via ASAPFax and the city telephone lines.

RECEIVING a fax is not a lot of a problem, even after un-patching the Internal Resource Function. The problem was in Fax Archiving. For example, we can't seem to REPRINT a received fax. This is probably due to the fact, that off the

TUGSON (AP) — A bank manager led up with being robbed and only released to give an apparent robbery city money but also told her to leave, and she did.

The suspect, noted for dressing a blonde wig, was arrested about 10:15 p.m. Tuesday after a witness saw her remove the wig in the parking lot and identified her as a police.

Police held Kathleen Truette Truette, 31, on suspicion of two counts of robbery, one of armed robbery and one of attempted robbery.

Manager Truette Greer just said he, not her, didn't want going to happen today, said Terry Rink, who manages Wells Fargo Bank's Arizona division.

Rink said Greer's branch had been robbed last month by a woman wearing a blonde wig.

"When Truette recognized her, she walked over to the teller and said, 'What kind of transaction are we doing today?'" Rink said.

"She said the lady was looking up at her and didn't say anything. Truette said, 'I don't think we're going to do any transaction today. I want you to leave and don't come back,'" Rink said. "She said the woman just turned around and walked out."

Police said the woman was believed to have robbed three banks last month.

Dates and times on the activity log of sent and received faxes are the same. Thus, we can't specify which fax to reprint!

The fix seems to either involve an on-line clock or vector a unique date/time for each received fax. But, when happens, if we receive two faxes, before manually changing the date/time? Then, we can reprint neither? Also, ASAPFax is not timing old faxes, probably because we can't reprint them yet, as above. We are especially anxious to test the reception with the printer type set to "none", since this offers the promise of making use of the ASAPFax unit as a modem, without any computer or printer! Well, for the RECEIVING, at least!

Finally, we are looking at how to incorporate an A/B switch into the configuration, either manual or automatic, in order to hide everything out of the way of make room!

David E. Lanson STXOP SOL BBS @328-482-6444

evan@home.com (1992)

10 Ahead,

I have a 2048 keyboard fix that I'd like to share with everyone. Several weeks ago my 2048 keyboard stopped working, when I opened it up I found the plastic thingy with

modern port on the Mac, loaded up the Mac program in the hard drive, and installed the EPROM in the Z80, then powered up and named both programs per the instruction book with the Z80-to-Joat link.

Everything seemed to work, except the Z80 did not show up on the transfer window on the Mac. All the other drives on the Mac showed up, so the transfer window, and I could switch among them using the DRIVE button on the panel, and the Z80 displayed "FLOPPY 2 Running," but the Z80 did not show up on the Mac screen. Tried putting the serial cable in the printer port on the Mac (also serial), but still no luck. Tried plugging and unplugging the cable, etc. Still no luck.

Has anybody encountered a similar problem? Any advice?

Bill Collins

From: starkey@dolph.com

Subject: Spacey surfs the net!

Sender: oswin@comcast.org

Ted! It's time - you CAN surf the net from the comfort of your own rubber-key 486. Spacey.

Here's how to go about it...

1. Get hold of a VTXXXX modem from Brian, plus the PD type 1. This will set you back around a tenner. If you've got a +1 or +1A, you'll also need a Fax!
2. Find out what the local DNS access number for Dolphin is. Call 0871-717-7080 or Email ukserver@dolph.com
3. Load the Finetroll software (Spectrum will not work) and set the terminal options to 7 data bits, even parity and 1 stop bit.
4. Dial the local access number, press the line switch on the VTXXXX device, and enter terminal mode. At the prompt enter DRLPH.
5. To sign up for free access until the end of the current calendar month, enter GDDLEPHE as the username and FUTURE as the password. (Note that you will be charged at 3p per minute for using the local access number, even during this free period. Unfortunately I have been unable to get the Spacey to work on the main number -)
6. Once you're on, you can find a text-only Internet Navigator, Usenet browser and local news. Entering /WHITH 64 at any prompt will tend to make the display more readable.

And that's it! Finetroll's quite easy to use and you can easily prepare timed off-line (I'm writing this in Twerword II) and upload them later. You can also capture any replies to the buffer to read off-line.

Garry Lancaster
GarryLancaster@dolph.com

RECENT QL FREWARE

(Oct 1997)

As a big fan of Freeware, I keep an eye on what Freeware comes out for the QL. I use the Internet to keep current with the European scene. A number of QL authors or QL BIOS's have web pages on the Internet. Below is a list of some of the more recent stuff that I have come across over the last few months. Most descriptions are taken from the web sites and I really have not tested each

program.

EDH82 - A very efficient and versatile editor for plain text. Includes line numbering and deleting line numbers selectively. Suitable for any QDOS style system. (34K)

CIM - The (no longer supported) Computer One Monitor modified to run any QL (QDOS or OS/400) system from .M on. Successfully tested on QL with (Super) Gold Card and QD0. Extended to emulate the Posix Environment. (15K)

ARKE2 - A Cross Reference generator for "ODR" style GST assembler test records. Example compiled job as an example for the FDI module. Do not use with pre-4.06 versions of GST or with already newer PEK versions prior to PEK 2.0 (35K)

QSEND - A group of functions and procedures to facilitate some inter-job communication, by transferring text and other data via PIPES to and from MD COM channels, or other PIPES (38K)

RecoverQ - Can be used to recover damaged files from HEADEND backups, backing up disks copying foreign media to DOS, AMN, or QL with "bad" structures, surface testing, then-formatting, or formatting to user defined specifications. (34K)

UHR - A job with a simple analogue display clock of variable size (by string parameters) from 12x16 pixels up to the full screen. It should average itself in a fraction frame, if present, and will always return valid. (11K)

MEMIV - A visual memory monitor job, taken from "memmap", corrected to some extent, and modified to suit the requirements of the different QDOS/OS/400 operating systems and screen sizes. May not work with the A1600/Ax high resolution screens. (5K)

CDISK - A SuperBASIC extension for backing up single files, directories, groups of directories, or entire disks, and deleting directories. CDACK is an example program, supplied with the SuperBASIC source and as an executable job, that can further be used as a background job for backing up at regular intervals. (34K)

QL Profiler - This is used with C programs to determine how they operate internally, looking for areas where the program can be optimized. Helps C programmers figure out where the program is spending the most time. (60K)

QL-Web - The Unix text-only Web browser has been ported to the QL by Jonathan Hudson. Two different versions are available, one for (Super) Gold Card and one for standard QL's. Will only browse local files as networking software has not been written for the QL.

QVFS - QDOS Virtual File System (alpha version) is an Internet style file system for the QL. Lets you access QL files similar to Unix file system. Uses the file system is translated to "real" QDOS file system. An example of translations is below:

/net/floppy/	cd _fpy_
/printer	cd _lpr_
/cd	cd _
	upper directory

You define how you want the Unix file system to translate to the QDOS file system. This system would allow for easier porting of Unix applications because no changes would be made to the source code about the filing system.

Q cascade - A PE menu-based way of monitoring programs. You define the structure of the menu and the commands that it executes. Very similar to the "Start" button in Windows95.

Exorcist v. 1.12 - A front-end for Ghostscript, the postscript viewer.

Winlink - A PE utility that allows you to link and unlink Cascade positions.

ZipBack - A backup utility.

TCBack v. 1.02 - The latest version of the hard drive backup program.

All of the above programs are available from
GNU Freeware
 c/o Timothy Secore
 38125 Lexington St. #200
 Fremont, CA 94536

Just send enough disks for all of the programs you want
 and return postage for the disks. If there is any
 discrepancy that you are looking for, let me know. If I
 don't have it, I can usually get it fairly quickly.
secoretim@earthlink.net

www.gnu.org/archive.org.sg/cont/

Sinclair E-Mail List

Cable, Bill	bcable@erion.com.com
Collins, Bill	billcollins@earthlink.net
Copple, Les	jacopple@juno.com
Davis, Frank	frankdavis@quest.net

Demoiray, Jeff	1047271110@compuserve.com
Feng, Al	afeng@juno.com
Ganger, Gary	pganger@earthlink.org
Ganger, Gary	wincere@juno.com
Hess, Fred	bfhess@juno.com
Hoschell, Stuart	stuart@prod.internat.co.uk
Jay, Marlene	Marlene_Jay@rta.hi.net
Kacur, Joe	1026231137@compuserve.com
Kahle, Alvin	alvin@compuserve.com
Lancaster, Gary	drakegg@earthlink.com
Leppert, David	dleppert@earthlink.com
Linben-Adel, Paul	p.linben@t-online.de
Miles, Suzanne	slmiles@earthlink.com
Purnell, Bill	1007861166@compuserve.com
Rosen, Walt	wrosen@earthlink.net
Shepard, Jay	jashpard@earthlink.net
Smith, Dennis	dennis.smith@juno.com
Swenson, Tim	swensont@earthlink.com
Swenson, Mally	swensont@earthlink.com
Swenson, Robert	robert128@earthlink.com
Taylor, Jeff	jrtaylor@earthlink.com
Waterman, Dye	dyewater@earthlink.com
Whittington, Barry	wh0002@earthlink.com

Looking for an address or a person?

The best on-line search engines are:
www.altavista.com
www.yahoo.com

FROM THE CHAIRMAN'S DISK II

Donald Lambert

Here it is November and for some of us it is the winter months that are beginning. Not to scare you people in the southern states away from this area but when I moved the laws for the last time in October I saw snowflakes coming down. And this month we had our official first snow-of the year but it amounted to nothing more than wet streets since the ground was so warm that it all melted on touching the ground. But our weather signals a reason, for a lot of people, to computing with the T/S computers.

Many of the projects that I had in mind to do when I last wrote just didn't get done. But I did get some projects finished but in some cases not tested.

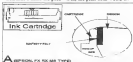
Printer Ribbon Re-linking

First I will give the name and address of the place that has the supplies and directions of how to do it.
RAVEN SYSTEMS OF OAKLAND NJ INC
 P. O. BOX 252
 FRANKLIN LAKES NJ 07417

Send them a LEASE for the price list and instructions. They also have kits for the INKJET and SUBINKJET plus color ink for the dot matrix printers. These are cheap and the \$5.00 per order shipping is not cheap but it is a lot cheaper than buying ribbons and having them dry out prematurely.

Several years ago I ordered 4 oz (received 4 one ounce bottles) of black ink and three sets of felt pads. The felt pads are off white and 3/4 inch by 1 1/2 inch by 1 1/4 inch.

The instructions I had then said to glue with Krazy Glue a pad where the ribbon will rub against the pad near where it enters the cartridge. (The new instructions have drawings. See the enlarged copy I made.) I guess that is to give the ink time to be evenly distributed on the ribbon. So I glued up three ribbons, and before testing for print head clearance I mixed the pads. Well, the print head would hit



A SPECIAL FOR RAVEN TYPES

the felt pad and keep on hitting the pads on turn on of the printer. So I stored the ribbons and finger the project. Then the last summer I took another look at the problem and I glued one pad to a ribbon and I checked for clearance and with an exacto knife I trimmed off the pad where the print head would hit it. Tested and on turn on the print head did its run to the left and off the cartridge and did not repeatedly hit the pad trying to go further left as it did on the mixed pads. And I had bought an electric screwdriver so I used it with a screwdriver blade out of another set to run the ribbon clear around the cartridge. I put a drop of

white out on the edge of the ribbon for a marker and fixed the tape it took. With this ribbon and screwdriver it took 2 minutes and 19 seconds. I had put several drops of ink on the ribbon before hand. I tried the mixing by printing on but it was not uniform. So I again added more ink and I rolled the bit with the screwdriver. And since I didn't use the computer for a few days the ink had more time to distribute properly. I originally thought that I would have to add a drop of ink each time but I have found that the ribbon prints out very dark without that drop of ink each time. If it starts to fade then I add no-ink.

Crooked Printing Cure

The other problem with my printer (EPSON LK-420) is that with single shots the paper guides sometimes get bumped and the printing is at an angle on the paper. And once it does that it is the middle of a sheet when the printer got a head bump. So I figured about that all I decided to add steps to the paper guides. I carefully measured the distance between the left guide and the end of the paper tray and then cut a piece of wood to fit there. I did the same for the right side. I added a piece of wood so that the steps would stay in place and printed them about the same color of the printer and they held the guides in place and no more crooked printing. While I was cutting I also cut a guide for the right side for when I use a newspaper paper to put in a small notebook. The big expense of this was the use of paint.

220 Volts AC Power Supply

The Z88 EPSON ERASER is made in the U. S. and thus requires 220 V AC to power it. I had a transformer that put out 18 volts AC and so I watched for one to use to reverse and get 220 V AC. I did find a 220 V AC transformer that put out 18 volts AC so since it was just a few dollars I bought it. And when wired and under no load the output at the lead end was 220 V AC. Well it ought work and might not I didn't try it. In providing my favorite electronic place I use a power supply that was in the wrong area and so I carried over to where it belonged I eyed the instruction sheet and it said 110000 V AC input. It had no power cord and was a hefty thing to put out 5 V DC at 2A and 12 V DC at 4A. And from the double voltage input it had to have two 180 volt windings to make a 220 volt AC input transformer so if you connected one winding to 110 volts AC you would find a winding that put out 110 V AC. And then if you connected those windings to wires properly you would get 220 V AC. The price was right so I bought. There was a chain of what to connect to get what output. To use it on 180 VAC it had connect terminals 1 to 2 and terminals 3 to 4 and connect the input voltage to terminals 1 and 4. But if the input was 220 V AC to connect terminals 2 to 3 and the input voltage to terminals 1 and 5. So I connected it up with terminals 2 connected to terminal 3 and I connected power (110 V AC) to terminals 1 and 3. Then I tested across terminals 1 and 5 with an AC voltmeter when I plugged it in and there was 224 volts across terminals one and 3. But I had no case for the power supply. And also the DC amperage was halved because I used only one of the 110 volt windings to power the unit.

Huntington HamFest

On October 3th I went to the Huntington HamFest which is about an hours drive from here. I had a seat last which included a color monitor (mine had died), a case for the power supply, certain clips for projects and 1.5 dollars and disk cases for 3.3 disks. The hamFest was small. There were close or no vendors outside and about 25 inside. This was not a make money deal since the vendors (almost all make items) were more interested in selling than selling. I found a color monitor (AMDEK Color-1) that was running but so I bought it. And I found some LG height disk drives (4088) and a case that had originally held a power booster for a Citi. As a quarter for the case I could not go wrong. The case was used to house the power supply. Lack of space prevented the installation of a switch or fuse but I can live with that. So case project got finished.

On October 13th I went to see Frank Davis and picked up another TOPPER for the Z88 and a modem for the Z88. It was nice both ways and that is about a 90 mile drive which took over two hours since about half of the way was on a narrow two lane road and there were a lot of bad curves and hills and no passing zones. Out of curiosity I would have driven to Mexico if the weather had not been bad since I was already in Peru. Of course there are all cities in Indiana and there is also a city Chicago but I am not sure where it is located.

CATUG Meeting

Then on the 29th of October (Sunday) I drove to Chicago to be at a meeting of CATUG which was held at Bob Swager's house. That is a 240 mile drive for me and on the toll road it seemed that I needed a cent to pay the toll. It is 39 to the end of the I-40 toll road and then to side Chicago was 30.45 every few miles. And as that's home I met several. I won't go into names since I forget more by now and I did not write anything down. Even if I had my handwriting it is bad but I still would be guessing. One person that showed up was Philip Kordovskis who is getting taller and taller. He came with his side back another senior in high school but not the same school. Nate Padnos also showed. There was some TDS talk and some hardware work (testing the Z88 module) and lots of general talk. And then it was a good day with warmth and sunshine (it clouded over and sprinkled) there was Bob in the back yard with the charcoal grill and an old hair dryer blowing the charcoal to a big cloud and we had beans and hot-dogs. I could tell that the two boys had been there a lot since they quickly handed out all the stuff to eat. The only excitement was some yellow jackets that tried to chase everything but Phil with a paper plate disposed of twenty or thirty of the yellow jackets. I stayed over at the Hoffman Estates Red Roof and returned the next day. And then Tuesday was when the weather went bad.

Color and the TS-2066

In a discussion with Bob I learned that if the power supply to the TS 2066 was too low of voltage (below 15 volts dc) you lost color. I never had color with the monitor that died (except for a minute or two at turn on) and then when I got the Amdek I had color more. Before with the Magnavox monitor the color would be there for a very few

connects them it went to black and white. When I tested the power input under the load of the 2068 (I used a breakout box at the power line) I found the voltage to be around 18 volts. Then I received a letter from Alod and he gave me the location of the pot on the 2068 that controls color. But when I bought a second Ametek Color-I monitor I wanted to test it with the computer I wanted to use it on. I found that it had color and it stayed color. WOW! So I finally this last week end, after coming home from the Ft. Wayne Ham and Computer Fest, tested all five of my working 2068's and found a couple that gave color with no adjustments. Saving garage to have color. And, like now, when I am using the word processor I turn the color knob on the monitor to get b-k or nearly so. So I guess I have that problem fixed for the time being. The TS 2068 is one that I ordered with the Rascal Spectrum chip installed inside when I was at the Indianapolis Computerfest in May 1987. I believe that I ordered it through Knighted computers. I must have sent it to Dan Miller to have the magnetic switch converted to a slide switch on the end of the computer.

Ft. Wayne HamFest

On November 15th and 16th there was a Ham and Computer Fest in Ft. Wayne. I was there both days. On Saturday the 15th there were too many people to see the flea market stuff. And of course most of the real bargains had been sold Saturday but I did see some stuff and bought a little Sunday. I bought another Ametek Color-I monitor from the same person that I bought from at the Huntington HamFest and same price. I was looking at a 1/2 height drive (3.25) and the seller couldn't answer my question of the density of the drive or even if it worked. "Here" he said take it with you, I will push it since I won't take it home". I bought very little other stuff. The drive turned out to be a 400K and tested out O.K.

At the HamFest I did not see but a few 3.25 drives and they were all high density. I did see some T20K 3.25 drives but no bargains for used ones at \$8.25 each. If I wanted to go to MSDOS there were loads of used computers from almost five (some some working some were fire) to overpriced. Plenty of CD ROMs. I did see several Commodore, Apple and one TI computer. If I wanted to go Mac there was an early one for sale for \$19.00 complete. I don't know if it was the version or what but attendance was down this last year but it seemed that more people were carrying bags of stuff. I visited with

Frank and Carol Basso and he told me about some of the dealers that left Midway in 7-1 inches of snow to come to the HamFest. My car got some 1/2 to 1/4 inches of snow on it while I was at the HamFest Saturday but the ground was wet and not slippery.

Z88

This is something that I did while trying to get another connector from the disk drive to the Z88. I have later found that the same setup is used for an IBM but I am not sure at this time.

Z88 3008 9-pin D sub male to 25 pin D sub female connector

9-pin	25-pin	9-pin	25-pin
1	12	6	25
2	13	7	26
3	14	8	19-22-23
4	15	9	19-22-23
5	16	10	19-22-23

TS-2068 Modem

I have a genuine TS-2090 Telecommunications MODEM by Wausage.

Of course there is no documentation and I wonder if anyone can supply a copy of the original manual for the unit. I have the software for its use but it would be nice to have a copy of the original documentation for the unit. I will pay for the copying and postage or if the manual is sent I will copy and return.

MUSICOLA

I have a program "MUSICOLA" that is an cassette from which I did get it to load and saved to both the LaKan and the Ollgar system by way of the MM button. I found no way with the error trapping used to break the program. I need the documentation to be able to use the program. Again I will pay for copying and the postage if it is sent to me. Or I will copy and return the manual. Has anyone ever converted this program to disk so that the source and loads are in and from disk not cassette?

Byte Power

Once upon a time there were three monthly newsletters of programs by the Bolvent Brothers. There were some very good programs on them. Has anyone ever converted these programs to disk? It seems that if so that they should be shared.

That's it for this issue. See you next issue. GO

(A Ba-Baz)

by Robert Hartwig

[This is where I goofed not once, but twice. blame it on the computer! *Silbo*]

For any who did a double-take _____ should have read

```
OPEN KEY #1,KEYS:PRINT #1,"NOT_GG",
PRINT #1,"ALTERED" #1,CHRS(90) :PRINT
#1,"ALTERED CHRS(39), CHRS(34)" :PRINT
#1,"ALTERED" #1,"#1":CLOSE
```

A line editor might also be used to create a file with an unnumbered series of commands such as these, although one type of QJ editor I tried that has a TAB mode of

operation (Tanner and Ray Rindler in memory) does not work in QPC for me. Apparently there is a conflict between the memory address it uses and the one required by QPC. Neither can the Toolkit 3.00 be used to directly create a QJ file, but it can be used as follows to make a listing of numbered statements which create the above KEYS file when RUN

```
10 OPEN KEY #1,KEYS
20 PRINT #1,"NOT_GG"
30 PRINT #1,"ALTERED" #1,CHRS(90)
40 PRINT #1,"ALTERED"
```

```

COMP (33), COMP (34) "
34 PRINT #7,"ALREADY "I","P"
40 PRINT #7,"LEAVE ROOT"
70 CLOSE

```

The problems that nibbled at a few characters in my first article on QPC seem to have devoured whole pages from the man I sent by disk to Alford for the follow-up "More On QPC." As the saying goes: "some assembly is required" to put together what was in QJAW with what was not, using the following instructions:

In my previous observations about using WIN partitions on ZIP or other removable-media hard drives with QPC, I should have mentioned that such disks or cartridges cannot be switched once the

emulation is started. Only the one emulogically to the drive will be recognized. Otherwise, when a DIR WTNs, or a RESET or exit of QPC is attempted the system

will freeze up. A cold restart of the computer is then required in order to regain control. The only way I have found around this is to be to do as you find from QPC with the original disk in the drive, then make the switch and restart the emulation. Obviously, this is not a problem when a fixed hard drive is used to set up a WIN partition.

Some have had questions also about setting up the CONFIG.SYS and AUTOEXEC.BAT files as described in the QPC manual, without using the MENUITEM function. After installing QPC on hard drive d:, it may be called from a DOS boot disk in drive A. First format a new disk using FORMAT A: /S so the DOS system and COMMAND.COM files are installed on it. Then use your DOS EDIT program to set up the following CONFIG.SYS file on this disk:

```

LASTDRIVE=D
SETVER=D:\SETVER\1.5.2
FILES=32
STACKS=10,256
COUNTRY=086, d:\DOS\COUNTRY.SYS
DEVICE=D:\DOS\HIMEM.SYS /MEMSIZE=1024

```

Create the following AUTOEXEC.BAT file for the disk

```

@ECHO OFF
PROMPT $P$K
PATH=d:\DOS;d:\QPC;A:\
d:\DOS\UNDIR
REM d:\MSDOS\GUEST
d:
CD\QPC
REM d:\LASTDOS d:
QPC -B -A:B -P:1
d:

```

Note that letters of the respective (A) drives given for LASTDRIVE and all drive-paths should be adjusted in these listings to conform to those used in your system setup. A mouse driver must be installed for

QPC to load properly, even if you do not use a mouse with it. In the line that calls for QPC to be loaded from its hard drive directory, the -B switch skips a key press to confirm QPC startup. -W 3 looks fine for a DOS3 file in WTNs, and -P 1 sets LPT1 as the default parallel printer port. The two commands shown in REM lines and described in the

following paragraph may be ignored if you are not using a removable hard drive or Stacker.

The first REM line is where a ZIP drive would be activated if you have one. Mine is the parallel port Zipex version made by Imaging, for which this line sets to universal GUEST driver, which is in the \EMPHON directory. If you are using a removable hard drive that auto-mounts on system startup, then include the appropriate lines to do this in CONFIG.SYS and AUTOEXEC.BAT. If you have Stacker 4.0 installed on your system hard drive, be sure to include its DEVICE command in CONFIG.SYS, the necessary disk lines in the start of AUTOEXEC.BAT, and include UNSTACKER

in the PATH line. A Stacker-compressed disk or cartridge may also be activated independently by using the command in the second REM line, where d

is the drive-name for the

medium with a Stacker Anywhere file. If no Stacker Anywhere file exists on the current cartridge, then QPC will usually normally, with access to the WTNs cartridge if there is one. However, the basic file processing will fail if Stacker Anywhere activation occurs, so QPC -B -W n -P 1 must then be typed in manually. Interestingly, after QPC emulation is terminated and EXIT is entered to end Stacker Anywhere, the basic file will try to start QPC again. It stops with an error report.

When using the extended storage of a WIN partition or an ED drive, it becomes more practical if not an necessity to set up file directories. One reason is that some programs may use same-name files that would otherwise be overwritten or conflict with one another if placed in the same root (primary) directory. Another reason is that data files may be stored for easier access in separate directories such as DOC1, DOC2, ABA, CRP, etc. For instance, when I transferred to a ZIP cartridge of the QPC system all of the QULL and ABACUS files I had collected over the years, I put those in a DOC1 library directory that I would only occasionally refer to. All those in current use went into DOC2. ABACUS data files went into ABA, and so on.

The MAKE_DIR command (available also on Gold Cards) is used to create such directories. It uses the syntax MAKE_DIR WTNs dir_ in which n is the number of the WIN partition and dir is whatever name is given to the directory being created. A DIR will then show the new directory name followed by >

The PROG_USE, DATA_USE, and DEV_USE commands are provided to assist in directing a program to the proper drives and directories for its program and data files. In this respect, recent versions of programs such as XCRANOE v3.90 are quite well-mannered and need only a PROG_USE and a DATA_USE definition in their boot file in order to switch to the proper directories. DEV_USE definitions might also be placed in the boot file for the respective QULL, ABACUS, ARCHIVE, and EASL data directories. For example, definitions such as DEV USE 1,WIN1,DOC1,

More On QPC

and DEV_USE 1,WINS_DOC1_ might be placed in the XCHANGE boot listing, followed by PRDG_USE WINS_EXCHANGE_ and DATA_USE DEV1_. This causes XCHANGE to look in the proper directory for its HELP and printer data, and when QULL is activated, WINS_DOC1_ is the default directory for its DOC files. To switch to DOC1_ only DEV1_ and the file name need to be entered as a SAVE, LOAD, or ? prompt. Other DEV's, definitions may be put in the boot listing for the other programs included in the XCHANGE suite, as shown in the last listing below.

To make the computer do most of the work, I placed the following BOOT listing in the root directory of my WINS ZIP disk as, with the -W3 switch installed, it brings up a menu of all programs on the disk whenever QPC is loaded or reset. Note that only the first 3 of the 36 available c(s) definitions are shown here as examples, but the actual listing may include definitions in lines 1 through 36 as shown in line 3.

```
1 CLS. CLS #0: DDE c(136,14): c(11)=
"QULL123"
2 c(2)="XCHANGE"
3 c(3)="XCHNGe"
37 FOR j=1 TO 36
38 AT 1-1-18*(j>36),30*(j>18): PRINT
CLS(j+47+35*(j>36)):"~",c(s(j))
39 END FOR j
40 AT #0,0,0: PRINT #0; " Ray: 0-9
OF 4-9 TO LOAD"
41 a1c=CODE(STRKEY): AT #0,1,15-
PRINT #0;STRKEY;" " ;STRKEY-IF a1c=1
THEN GO TO 41
42 a1a=a1c-47-35*(a1c>37)
43 IF a(s1c)="~" THEN GOTO
44 IF a(s1c)="XCHNGe" THEN GO
WINS_KEYS: REMARK KEYS IN WINS
45 a1a="wzsd_" & a(s1a) & "_BOOT"
LOAD L04
46 DEFINE PROCEDURE a1: SAVE
WINS_BOOT: RETURN: END DEFINE a1
```

Once your c(s) definitions are entered, the above BOOT routine requires only a single keystroke to load the desired program boot routine in the specified directory. Note that the directory names must be exactly the same as those in the c(s) array. The boot listing below is the one I use in the XCHANGE directory to load the XCHANGE program.

```
1 CLS. CLS #0
2 AT #0,0,0: PRINT "1 - QULL use
DOC1"
3 PRINT "3 - QULL use DOC2"
4 PRINT "3 - ARACUS use AR_"
5 PRINT "4 - ARCHIVE use DR"
6 PRINT "5 - SASSEL use SR"
7 a=CODE(STRKEY)-48: IF a<3 OR a>5
THEN GO TO 7
8 DEV_USE 1,WINS_DOC1_
9 DEV_USE 2,WINS_DOC2_
10 DEV_USE 3,WINS_ARA_
11 DEV_USE 4,WINS_DR_
12 DEV_USE 5,WINS_SR_
13 SELECT a
14 -1- DATA_USE WINS_DOC1_
15 -2- DATA_USE WINS_DOC2_
```

```
16 -3- DATA_USE WINS_ARA_
17 -4- DATA_USE WINS_DR_
18 -5- DATA_USE WINS_SR_
19 END SELECT
20 PRDG_USE WINS_EXCHANGE_
21 PPR_USE SR_
22 EX "WINS_EXCHANGE_EXCHANGE_EXE"
23 STOP
24 DEFINE PROCEDURE a1: SAVE
WINS_EXCHANGE_BOOT: END DEFINE a1
```

The apparent redundancy of repeating DEV_USE definitions in DATA_USE allows the default data directory to be pre-set, for example, to the primary program of QULL, while at the same time allowing the WINS_ARA_ directory to be used for ARACUS by prefixing any data file name with just DEV1_. An alternative would be to key 16 and return to the XCHANGE SET option to change the default data directory. For other BOOT routines that involve a single program, such as QULL, 2 to DEV1_ and DEV2_ definitions allow selecting as the default either the library directory DOC1_ or the current file directory DOC2_. These definitions remain active after an exit from the program that used them, so doing a RESET is usually advisable. The little ex procedure is included to make it easier to save a copy of the listing, while naming it just by typing ex.

Clarification

If you have Stackcr 4.0 installed on your system hard drive, be sure to include its DEVICE command in CONFIG.SYS, the necessary check-lines at the start of AUTOEXEC.BAT, and include d:STACKER in the PATH line. Note that, while QL programs find their data may be stored in a Stackcr-compressed partition, QPC itself must be installed in a non-compressed drive partition.

This completes the menu I sent in last, as always, the learning curve on new devices or software such as QPC and SHMSQL seems to be spent on exceptions and additions. For instance, although the QPC manual emphasizes that the QPC translator program must never be installed on a compressed hard drive partition, according to Norman Durbin's article in the Sept/Oct. QL Today, he made such an installation (follow reading the instructions) and it worked OK. In Al Fong's article QPC the Missing Link) is the comment that even say a 16 CPU will suffice to run QPC, but as the manual the reason for requiring a 486 or higher is that it is designed to use commands found only on CPUs higher than a 386.

I never tried networking with my QLs (it was expensive enough to get even one working at a time) but the extended commands described in the SHMSQL and QPC manuals seem to provide ways of doing it. In the SHMSQL manual is the comment that SHMSQL provides low-cost networking like the Toolkit 3-Network allowing you to connect two or more machines which run SHMSQL via the serial ports. The QPC manual states that the COM-port to which a monitor or other device is connected must be configured as "none" in SHMSQL. Also, the interrupt which is used by such a COM-port device cannot be used by any serial port (e.g., if a COM-port device uses INT4 then neither SER1 nor SER2 may

use ENT).
Beyond quoting these comments, I cannot advise Al Feng on his questions, other than to contact Harold Kilgus

the author of QPC, or Andrew Mear, publisher of QL Today and distributor of QPC through the Joshua Mear Software

QLATter

by Al Feng

The QLATter front end program is being provided as software for QLAY users. QLATter will run on a QLAY emulator while host PC only has a meg of memory. QLATter is based on QLANter. QLATter does not require TK2_EXTENSIONS, and therefore lacks the functions which rely on TK2 code. For those who are familiar with some of my earlier programs, QLATter is to QLANter as QLITter is to QLANTer. The internal program functions (COPY, DELETE, etc.) are accessed by the FUNCTION keys. Since QLAY uses the host's clock, the clock setting function of QLATter is superfluous, but remains. QLATter is QRAM (HIDIRECT) and TASKMASTER, compatible, and can be used as an alternate utility program for these TASK SWITCHING, Save and program.

QLATter may be distributed freely. Although this document is NOT extensive, please include it when distributing the program.

USING QLATter The TAB and SPACE keys are used when navigating the "opening" screen. The ARROW or FUNCTION keys are used after an opening screen window is accessed. Some alphanumeric input is required for selecting "other" devices. When the main screen is displayed (this will show the files on the device), the ARROW (cursor) keys are used for moving the "bar" from filename to filename. 76 filenames are shown per screen. The ENTER key is used for selecting the filename to be acted upon. Sub_DIRECTORYs are accessed by moving the highlighting bar over the DIRECTORY name as if it were a file, and pressing the ENTER key. QLATter provides five file management functions accessed by pressing one of the function keys when looking at the program menu. COPY copy from any valid medium to another. DELETE delete file from any valid medium. PRINT print program's "file" extension. FORMAT format any valid QDOS medium -- see caution VIEW -- interruptible file viewing. In addition, you can EXEC W a program from within QLATter.

delete file from any valid medium. PRINT print program's "file" extension. FORMAT format any valid QDOS medium -- see caution VIEW -- interruptible file viewing. In addition, you can EXEC W a program from within QLATter.

SOME KEY PROBLEMS The internal program functions (COPY, DELETE, etc.) are accessed by the FUNCTION keys. The (esc)key key is used to return to the opening screen from one of the program's functions, and, the TAB key is used to slide the highlighted bar to the right on this page, with the SPACE key used to open the selection. SHIFT key combinations expedite shifting screen "pages." SHIFT + ARROW key to page up or page down. If there are more files to be accessed. SHIFT + FUNCTION key combinations expedite shifting screen "pages" when the physical medium has been changed in a device. The (esc)key key is used to return to the opening screen from one of the program's functions,

and, the TAB key is used to slide the highlighted bar to the right on this page, with the SPACE key used to open the selection. Changing DEVType type All valid QDOS devices are accessible, however, DEVTYPE devices are problematic, and sub_DIRECTORYs should be accessed directly.

To change the DEVType type: 1) Simply press "F" (func) (i.e., you want a new device number.) 2) Move the highlighted green (shaded) bar over the appropriate DEVType type (Alpha/Win) using the up/down arrow key(s). (the highlighted bar will also move if you press the first letter of the device name.) 3) Change the numerical value (1-6) using the left/right arrow key(s) if necessary (for numerical values greater than 9, then press the appropriate number key). 4) Press the ENTER key to accept your selection. Use the "other" option for selecting an option that is not otherwise available. Move the shaded/green bar over the "other" selection, input T, Y, W, S (Tp, Ym, Wm, Sd) or the full three character designation, press ENTER, indicate a numerical value between 1 and 9, then press ENTER again.

If it is a valid, non-protected device on your system, the file DIRECTORY will become available to you. NFS, USB access is viable as long as the device name conforms to the three character medium name standard. The device designates "nd" (network) which is supported as the name of the file server's device. THE DISPLAY As with many programs, QLATter's window size is dimensioned to fit a PAL television, thus providing as many as 36 (4 x 18) lines per screen, with a 508 filename minimum (i.e., eight pages) unlike programs which "order" the files. QLATter displays the filenames on the screen in the order they appear in a normal, connected file DIRECTORY request. The filenames are stored in a dynamic file (LIST, applied displayed on the screen in the order they appear in a normal connected file DIRECTORY request. If Qlat is your primary program (for example), then put it first on the disk and you won't have to page through several pages of filenames to access it. Put other often used files on your start-up disk near the beginning of the DIRECTORY to expedite access.

PROGRAM USAGE You must first SELECT the device being accessed. If it is other than wd, then move the (green) highlighting bar to the appropriate device menu using either the UP or DOWN ARROW key. If you want to change the device number, either use the LEFT or RIGHT ARROW key or a NUMBER key. After you are satisfied with the selection, press the ENTER key. The highlighted bar will move over to EXEC W. If you press the SPACE BAR, then you will open the main screen from which you can EXEC W an EXECutable program. You can TAB the highlighted bar to the right and

select UTILITIES, CLOCK, EXIT, OR SELECT DEVICE (again), and whenever if you TAB over to UTILITIES press the SPACE_BAR to open this feature, and then press the appropriate function key. If you encounter a flashing cursor key at any time, you must respond to it. Pressing the ENTER key is an adequate response. In the COPY function, you can indicate a row (different) filename on the destination device. To VIEW the contents of a file, you would 1) Press "V" to access the pre-VIEW function,2) Move the highlighted box over the filename,3) Press the ENTER key to select,4) View the contents of the file. File "viewing" can be interrupted and the viewing window is large enough to make text viewing convenient.

Quail .doc files will be roughly formatted on the screen under most circumstances. ASCII characters are called "black" and non-ASCII characters are called "green." To Delete a file, you would 1) Press "D" to access the de-FILE FUNCTION,2) Move the highlighted box over the filename,3) Press ENTER to select,4) Confirm (y/n) And, to use Hard-COPY looks for line feeds, so raw SuperBASIC LISTings should then be exported into Quail. Hard-COPY recognizes ".doc" files and will generate loosely formatted output. FORMAT can be edited by pressing the (esc)key key. If you accidentally

press the wrong function key and indicate the wrong device, then input MORE THAN 10 characters, press the ENTER key, and you will be able to re-select.

Different colored screens are used for de-FILE (red field with white x's) and FORMAT (green field with black x's) since these are potentially destructive to data. The screen color for the non-destructive utilities is white with red x's. The screen color for the EXEC_W screen is white with black x's. CONTACT What makes one fast and program easy to use and what makes one not is often subjective. Some of the features which I have listed (or, about which I have been told) that make a program easy to use have been incorporated into QL4THr. While QL4THr is very easy to use, this is a very minimal document. If you have questions, you can contact me via the postal service or e-mail.

AL FENG
954 RIO VISTA CIRCLE SW
ALBUQUERQUE NM 87105 USA.

alfeng@juno.com Feedback is welcome, though even really good suggestions may take time before being implemented.

HAPPY TIMES,
AND COMPUTING TO YOU .

ZEX FOR THE ZX-81

by Phil Page

From: rpage@earth.oxe (Phil Page)

Received by walter.hall.com (Frank Davis)

Subject: ZEX for the ZX81

Hello again and this time a special treat for all ZX81 owners.

It's ZEX time for the ZX81, turning your ATARI joystick or IBM PC into a virtual ZX81 keyboard. The joystick can emulate any key or combination of keys on the old ZX81 membrane or ZEX will translate parallel ASCII to ZX81 characters for you. ZEX includes a 2K RAM chip for storing the joystick key codes or ASCII lookup table and utilizes most situations this one requires NO special software drivers or changes to existing ZX software. A short program is required for the ZX to upload the translation codes to the ZEX RAM before you can use it. The complete schematic for this circuit is too complex to draw with ASCII symbols but will soon be available in GIF format together with the programming software from Steve's or Kevin's web site. I have included a functional block diagram to help explain the inner workings of ZEX.

Next time I will describe a 3 chip EPROM 'beast three' version of ZEX called TVRANWORLDWIDE ZEX. Until then, my fellow ZX81 owners, I hope you will enjoy ZEX as much as I do!

Phil

ZEX - ZX81 EXPANSION INPUT PORT FOR PC OR ATARI JOYSTICK

The ZEX input port uses a novel method of translating the digital inputs (i.e. your joystick positions) into any combination of ZX81 keys. You simply stick your joystick in the ZEX port and plug the ZX81 port into the ZX81 rear edge connector. Next load the programming

software, REMASUTRA, and select which ZX keys correspond to that position. The positions are defined as any combination of directions North, East, South, West and Fire. The program prompts the user through the programming steps and the screen graphically shows the ZX81 keys which have been programmed to represent the joystick positions.

For example
Enter the letter N to represent the North (UP) direction and the corresponding keyboard pops up on the screen with inverse characters (i.e. SHIFT and T) indicating the keys that are simulated when the joystick is pushed to the UP position. You can erase the key combination and program a new combination by pressing keys (on at the time) and the display indicates the current combination by covering the key diagram. Combinations like NW or NEP can also be given unique key codes. In total, a joystick can output 16 different key combinations. Programming combinations like NS are not very useful since the joystick can not be simultaneously pushed North and South but if instead of a joystick you use a separate switch or a connection to the printer port of a PC, you can program up to 256 different key combinations.

Another short setup program, REMOSABR, is run so the ZX81 to program the ASCII to ZX lookup table into the ZEX RAM.

ZEX operation can be explained by looking at the block diagram below.

The hardware on the left shows the normal ZX81 keyboard interface with the AD-15 address lines scanning the keyboard rows one at a time and the column data read through the ULA input port at D0 address FE. ZEX is

connected to the rear edge connector but operates in parallel with the existing keyboard. ZEX is scanned at the same I/O address as the keyboard, so the decoder enables the RAM at address FE. The data in the RAM is scanned by the CPU A8-15 address lines which are connected to 3 RAM address bits with the 74LS148 decoder. These 3 bits are combined with the 3 joystick switch contacts to form the RAM address.

The 74LS157 chips are used to select the joystick and second address lines at I/O address FE. I/O address OE is also decoded and causes the 74LS157 chips to connect the CPU A8-15 address directly to the RAM address lines in order to program and read the RAM contents. ZEX RAM address line A8-10 are available for selecting different stored key combinations for each game or can be

read with PC printer port E8-7 data lines to enter keyboard data from the PC to the ZEX.

Transistor Q1 enables ZEX RAM OE when any joystick contact is closed and also turns on an indicator LED to confirm proper operation of the joystick. This is important when debugging ZEX since bad contacts are often a source of problems. When connected to the PC, the base of the transistor is connected to the STROBE line and a resistor on the collector is used to stretch the strobe pulse.

The ZEX keyboard can also be read independently from ZEX at address BE. After programming the ZEX RAM, it is a simple protected walk switch S1 and a simple binary backup circuit makes the whole thing reversible.

VAL Function

by David Lessor

Back Swager-CENO104 writes:

Your last statement is correct. ROMDEM, Characterize it, wants the final block filled at with control Zs to complete the last block. Somehow ROMDEM knows what to do with the CONTROL Zs to complete the file properly. Someone in TTSLUC discovered the problem in someone else's ROMDEM program for the T32860 and fixed it in that program. Geo Characters might remember and have the article. I think the fix was a state table member of TTSLUC. —CEN0104—

Here is an article for your next issue. Save hope the 3268 uploads it to the Internet, in some kind of secure format! If you have any problems, reading it, then I can use the Apple!

It gives the updated row number in the code, for opening a message base in SOL BBS, with some ZAPPED errors! yeahhh, there seems to be some problem, as I'd use the other one, baby.

The 3268 seems to have some synchronization problems with the set @ 1300 BAUD.

VAL

One of the more powerful, and (Oh, Yea) useful instructions of the Thran-Sindler computers is the VAL function. Unfortunately, it is also unique to the Thran-Sindler computers.

The VAL function evaluates an arbitrary numerically-valued thing. It only returns an error C, in the case that the string argument does not evaluate to a number.

Apparently, BS Gates saw this in the early '80s, and decided that VAL was unsuitable for his instruction sets, since there is no limit to its execution time, and he was looking for something fast. However, VAL was deemed suitable for the evaluation of number strings, as in VAL "12145", which turns out to be a very economical way of writing 12145.

Now, I can hear you all yelling, that you also have a VAL, on your own machines. But, I guarantee you, that it will only remove the question marks from above address constantly!

But, the VAL, of which I speak, can be used to give

the elapsed time, online with SOL BBS. It gives the updated row number in the code, for opening a message base in SOL BBS with some ZAPPED messages. Lastly, and this example here, it is extremely useful in math modeling.

```
4175 LET a$="BATT(1-50*5)+1" GOSUB
1100: PRINT #7: "Your ELAPSED TIME was
"a$,VAL a$
(The numerical portion of elapsed time on SOL BBS)
3600 DIM B(55,60): LET a$="a$+VAL
a$(1,5 TO 3)"
3625 LET r$="": LET c$=VAL a$: IF r<11
THEN GO TO 3635
3640 PRINT "Length of NEW MESSAGE
BASE is ",VAL a$(1,4) + "..."
3645 IF c$=0 THEN LET r$=VAL a$(1,1)
3 FOR j=1 TO c$: FOR k=1 TO c$: IF
CODE B(j),k)=15 THEN GO TO 3
3 FOR i=1 TO 11k: LET a$(i)=a$(j,i).
NEXT i: LET p(k)=VAL B(j,k)
3 NEXT k: FOR i=1 TO 11j: LET
a$(i)=a$(j,i): NEXT j: FOR i=1 TO 11j:
LET a$(i)= VAL a$(j,i): LET q(k,i)=
a$(k,i): NEXT j: NEXT k: RETURN
```

Some confusion can be avoided, by inserting a blank line (or two) BEFORE line 3600 and AFTER line 3640 of the BASIC Code.

As can be seen, the last three statements constitute an elegant stretch of BASIC code. It implements a range-wise updating facility, for simulating a math model. I have an entire simulation language (System-Oriented Language), which depends for its simplicity and power upon this very VAL function, as seen in statements 3 and 4. But, SOL is still-born, given the dearth of equipment, for running the code.

Wynnon assures me, however, that IBM would be only too happy to build a VAL function into one of its machines, given a special order!

As a matter of fact, I do recall hearing from both Gateway and Dell, encouraging such special requests for customizing an order for personal computers! ☺

—David Lessor
—D Lessor spac, SOL BBS @520-882-888-8 320-882-3972 (voice) dlessor@earthlink.com

PART 2 - Conventional Hacking Techniques

By now, you should have an idea of how simple machine code works. Now we're going to look at the usual techniques of hacking. There are five techniques, which are called **Forwards Trace**, **Backwards Trace**, **Stack Trace** and **Interrupt Trace**, in that order of difficulty. Of these, **Forwards Trace** and **Backwards trace** are the only techniques you can use without a Multiface, and are the most reliable methods. You should only really have to use the others in exceptional circumstances, which are, on the whole, games which don't have a lives system or a GAME OVER message. Very few games use unusual conditions, since it's just a headache to the programmer.

We'll start with **Forwards Trace**. You've already had a go at this from the last part, so hopefully it won't be too hard to understand. Then we'll look at the backwards trace, followed by some practical examples.

Forwards Trace

For the forwards trace, you start with the lives initialization routine, and then work forwards from there.

The first thing you need to do is to find where the number of lives is defined. We've already seen how numbers are put into memory locations, and this is exactly what happens in most games. (From now on, all the machine code programs discussed here will be written as hexadecimal bytes, and as monospace.)

```

HL XX LD A,XX (where XX is the number of lives)
LD XX XX LD (XXXX),A (where XXXX is a memory location, which we will refer to as the "lives store")
  
```

You have already come across these instructions, but just to restate, the number of lives is put in the A register, which is then is put in the lives store, the overall result being the number of lives being put in the lives store.

To find this, use the search function on your disassembler (QUEST 16204 on STE), and search for **LD**. So if you had five lives, you'd search for **LD 05**. You may find that this instruction occurs a few times, but you will probably find that only one actually puts the value of A in a memory location straight away. If there appear to be two occurrences where the number of lives is put into a memory location, then you may have to test all of them. You can, in general, rule out memory locations in which the number of lives is put in twice.

If you want to confirm you've found the lives store, you need a Multiface. Load the game up, and while playing the game, alter the value in what you think is the lives store. If the number of lives varies, you've found the lives store. If not, try another possible location. If you can't find any memory location which looks like a lives store, you won't be able to forwards trace. I'm afraid, in which case you should try the backwards trace instead.

Once you've found the lives store, you'll have to search for occurrences of it. You are basically looking for

code which takes the value out of the lives store and puts it in a register (normally the A register), decrements the number by one, and puts the new result back in the lives store. To get infinite lives, you have to overwrite the decrement instruction, with a blank instruction so that the number of lives is left intact.

The code you want normally takes one of two formats:

Format

1st type

```

1A XX XX LD A,(XXXX) where XXXX is the lives store
  
```

```

3D DEC A (we want to remove this)
32 XX XX LD (XXXX),A (putting the new value in the lives store)
  
```

2nd type

```

31 XX XX LD HL,XXXX where XXXX is the lives store
39 DEC (HL) (We want to remove this)
  
```

You may find that there are other instructions between these. Don't worry about what they mean, just ignore them.

In order to remove the decrement instruction, we have to do one of two things. The most common is to replace the **DEC A** or **DEC (HL)** with a **NOP** (code 00). If this gives you only one life, replace the **DEC A** with **OR A** (code 07), or replace the **DEC (HL)** with **OR (HL)** (code 06). Don't worry why!

Backwards Trace

Also known as "backtracking", a backwards trace starts from the GAME OVER message, and goes back from there to the lives routine. It is normally used when a forwards trace does not work or is unreliable (e.g. when finding infinite energy), the exact alternative is to use a backwards trace.

The first thing you need to do is to find out what message is printed on the screen when you die. Nine times out of ten it's "GAME OVER", but there are exceptions.

For GAME OVER, you have to search for the following bytes: 47 41 4D 43 32 4F 36 4B 32. This is a GAME OVER in ASCII (look up the codes in Appendix A of the Spectrum manual if you like). Sometimes, you may not find it, in which case just search for 47 41 4D 43 (GAME in ASCII). If that search fails, then the GAME OVER text is not in an ASCII format (this is rare, because printing routines are considerably simpler when ASCII is used), and you can't do a backwards trace.

Once you've found the GAME OVER message, you need to find out which part of the program refers to it. Normally, a print routine will load a register with the address of the GAME OVER routine, then print it. One possible register is HL (as we have seen before), but also two other registers called BC and DE. Normally, all of these three registers are referred to as "register pairs", because they are two registers, each the same size as the A register, working together, so they can address all of the memory. You want to look for the following:

How to Hack
 On The
 ZX SPECTRUM

```

01 XX XX LD BC,XXXX (where XXXX is the
address of the GAME OVER MESSAGE)
11 XX XX LD DE,XXXX (as above)
21 XX XX LD HL,XXXX (as above)

```

(Remember that XXXX will be written "backwards" in the game's machine code)

You should only find one occurrence of any of the above instructions. If you can't find any, repeat the search but take one step from the address the GAME OVER text is. (This is because sometimes there are Spectrum ASCII control codes such as 16 XX for PAUSE, XX before the actual text, and these are referred to as the start of the message). If that doesn't work, repeat the search taking one step again. Keep doing this and you'll soon find one of the above instructions.

When you've found the instruction, note down where it occurs. The part of the code you are now in is part of the GAME OVER printing routine. What you now need to do is go back through the code until you find either the code C1 XX XX (which is IF XXXX), or C9 (which is RET, which behaves exactly the same way as RETURN in BASIC). Alternatively, you may find a blank area of memory (00 00 00 00 00 00 etc.). The address after one of these instructions is the START of the GAME OVER

routine.

When you've found the start of the GAME OVER routine, you can find out which part of the code calls it. Then, to get a cheat, you can remove all parts of the code which branch to the GAME OVER routine. Search for the address of the start of the routine. You will probably find some of the following:

```

C0 XX XX CALL XXXX
C0 XX XX CALL Z, XXXX
C4 XX XX CALL XX, XXXX
C1 XX XX IF XXXX
CA XX XX IF XXXX
C2 XX XX IF NE, XXXX

```

where XXXX is the start of the game over routine. IF is similar to GOTO in BASIC, while CALL is similar to GOSUB (so that a RET instruction will return to the instruction after the call - except in some protection systems, but more about that later). To cheat, simply poke all three bytes of the instructions you find with 00 (so as to disable the CALL or IF). And there you have it!

Using the techniques of forwards trace and backwards trace, you should be able to hack most old, unprotected games.

Lunch Hour Activities at Work

by Les Cottrell

If you have a PC and Internet access in your workplace, here is an alternate to playing Solitaire or Minesweeper at lunch time. I have a registered version of Games Lander's excellent Spectrum Simulator. I have discovered that I can run it from a 3.5 disk. (My company browses on loading personal software on their computer). If you don't have the simulator, go to Planet Simian on the Internet:

(<http://www.rmg.unt.net/publications/retrosp/games/advventure.html>), select simulator, then PC (if appropriate), and download Games Lander's Z80 Spectrum Simulator down to floppy disk. Use ZIP the simulator to that floppy. Now, with luck, your PC will think it is a Spectrum when you double click

on it. (I say with luck because it worked easily for me there is no guarantee that your configuration will be as friendly!) You should see a message that says you have about five minutes of normal simulation available. After five minutes the demo goes in to hyper-speed. If you are playing an arcade type game you're in deep



trouble - due to watch the little characters buzz around, but no way to keep up. But if you are playing a text adventure you shouldn't notice the difference. Unless you are running one with some changes, then it represents the screen faster than your 20M - which is an improvement! I like this better than my registered version for text adventures.

Web site <http://ftp.rmg.unt.net/publications/retrosp/games/advventure.html> has a couple of hundred text adventures to choose from. Another good site is "The Spectrum Adventure" (<http://home.virginia-pc.com/spectrumadventure.html>). They have sorted through and describe the best files, most of which can be downloaded from there. The "DOOM" series is useful to new adventures because you can type help and you get a hint as to what to do next on some.

If you are new to the Z80 simulator here are a couple of hints. If you don't want to read the documentation you have with the download:

Double click also on and after the message disappears

press F10 for the main menu. If you are in your office, select C for change and turn off the sound by pressing S. Press F10 and then press L for LOAD. Exchange the program disk for your disk of programs. Press ENTER and you should see the files you can LOAD from your floppy. If you haven't changed disks or added any you will at least see "program.z80" which is the tape loader driver and instructions shown is a previous Z80 Glue. Use the cursor keys to select a program and press ENTER. The main menu will appear displaying the initial screen of the file so press B to go back to the file and you are working with Spectrum.

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E-Mail: INTERNET fdavis@quest.net

Http:members.tripod.com/~FWDcomputing/index.html

THE V4 ROM

Frank Davis of FWD Computing is now able to install internal RAM and the V4 ROM. Details of his service can be found in the price list.

e-mail: fdavis@quest.net

The V4 ROM contains the following items:

Lost handles

In v3, handles could be lost by preempting the Filter during a save strategy, resulting in a 'File not found' error which required a soft reset to clear.

ROM cards

It is no longer possible to insert and remove cards while the Z88 is switched off - which could cause confusion, since the Z88 now wakes up when the flap is opened.

Printer2d

When updating the Printer2d settings under v3, it is dangerous to encounter a 'FAIL' condition. This has been fixed

with v4. In addition, the 'Allow low level' option now works correctly.

RAM device

The system no longer gets confused if files are present in the useful device when the Z88 is reset.

Expanded machine

The Z88 will now behave as an expanded machine (providing a full chip to PipelDevice, and 40K workspace to BASIC) if there is 128K RAM anywhere in the system, and not just as close to as with v3.

Filter display

In v3, a problem sometimes occurred with Filter when renaming a file after scrolling the cursor. This caused the first letter of the filename to disappear, but it fixed with v4.

They also lay out all even non-working Z88s accessories, software and books for refurbishment.

FWD Computing Ad for the HOLIDAYS

Prices good thru January 25, 1998

V4 ROM & Internal RAM upgrades For the Z88

I am now selling the Version 4 ROM, and the price for it is \$35 if you wish to install it yourself, and \$60 if sent to me to install (add \$15 for outside of North America for postage if I install it.)

The V4 ROM will not be of use to someone unless they have upgraded internal Z88 memory to at least 120K, as it was not designed for 32K internal RAM. External RAM will not work as well with this. I can do the RAM

addition for those who want it. The price for me to install 128K internal RAM is \$35, and to install \$12K internal RAM is \$55. This includes postage in North America, for elsewhere add \$15 for the extra postage.

When sending these to me it helps to let me know ahead of time and to plan on the time needed to fit the work into my schedule (I still work a regular job for the Federal government for a short time longer) and I should have them back on the way to the customer by 4 - 7 days after I get them.

All prices include shipping in North America, add \$8 per order for elsewhere. All prices listed are for US\$, for all others add 10% for currency exchange, for first time orders please allow time for check clearance. We accept personal checks, company checks, cash bank drafts and will ship C O D. (COD charge is extra on the shipping)

All payment should be made out to 'Frank Davis'.

Z88 EPROM cartridges made by Cambridge

SPECIAL FOR THE HOLIDAYS! 32K Cartridges are \$11 each or 3 for \$30.

Other items

Z88 to MAC Cables for \$8

SPECIAL! Z88 Serial Printer Cables are \$8

SPECIAL! Z88 Serial to Parallel Converter interfaces are \$34

SPECIAL! Z88 vinyl carrying cases are \$8

Toppers to protect the Z88 screen from damage are \$22

SPECIAL! QLINK for Z88 to QL Computer wires for \$12

MACLINK for MAC to Z88, or PCLINK for PC to Z88 are \$26 each or both for \$50

AMIGALINK for Z88 to Z88 Computer for \$25

(all of the LINK setups except the QL contain cable, cartridge and disks)

SPECIALS FOR THE QL COMPUTER

TEXT87 Word processor for the QL, only a few left. Presently the best word processor, with many fonts, good printer support, columns, etc. There are other support programs available to use with this program. **Save priced at only \$55 for the Holiday Season only.**

QUBIDE the IDE hard drive interface for the QL. With this you can add a hard drive, or a Syquest Removable Media drive (135 Mag. or 230 Mag.) to your QL computer. This means massive program and file storage. You can have up to 2 drives on you system, either hard drives, Syquest, or a mix. **Holiday priced at \$105.**

HERMES the co-processor that your QL has been screaming for. With this you get increased speed, improved sound and the ability to use high speed serial printers and modems. For the Holidays it is only \$25.

Send all orders, with check, cash or money order to

FWD computing
P.O. Box 17
Mexico, IN 46958

SPECIAL NOTICE

Around the first weekend of May 1998 we are planning to hold a QL/Sinclair get together in the State of Pennsylvania. This is following in the tradition of the QL shows first started by IQLR, but were last year opened up also for Z88. This year we want to include all Sinclair users. Contact us for more info. Send a SASE for more info as it becomes available. FWD